

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TRANSLATION
PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

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| | | Date of mailing (day/month/year) |
| Applicant's or agent's file reference PCTTEM038 | | FOR FURTHER ACTION See paragraph 2 below |
| International application No. PCT/JP2005/001913 | International filing date (day/month/year) 09.02.2005 | Priority date (day/month/year) 13.02.2004 |
| International Patent Classification (IPC) or both national classification and IPC | | |
| Applicant TEMCO JAPAN CO., LTD. | | |

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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| Name and mailing address of the ISA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

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| Box No. I | Basis of this opinion |
|-----------|---|
| | <p>1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).</p> <p>2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:</p> <ol style="list-style-type: none">a. type of material<p><input type="checkbox"/> a sequence listing <input type="checkbox"/> table(s) related to the sequence listing</p>b. format of material<p><input type="checkbox"/> in written format <input type="checkbox"/> in computer readable form</p>c. time of filing/furnishing<p><input type="checkbox"/> contained in the international application as filed. <input type="checkbox"/> filed together with the international application in computer readable form. <input type="checkbox"/> furnished subsequently to this Authority for the purposes of search.</p> <p>3. <input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.</p> <p>4. Additional comments:</p> |

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|--|---|-------|-----------|-------------|--------|-------|-----------|--------|--|--|--|---------------------|--------|---|-----------|--------|--|--|--|-------------------------------|--------|-------|-----------|--------|--|--|--|
| Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>1. Statement</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Novelty (N)</td> <td style="width: 40%;">Claims</td> <td style="width: 20%; text-align: center;">1 – 9</td> <td style="width: 20%; text-align: right;">YES NO</td> </tr> <tr> <td>Claims</td> <td colspan="3"></td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims</td> <td style="text-align: center;">9</td> <td style="text-align: right;">YES NO</td> </tr> <tr> <td>Claims</td> <td colspan="3"></td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims</td> <td style="text-align: center;">1 – 9</td> <td style="text-align: right;">YES NO</td> </tr> <tr> <td>Claims</td> <td colspan="3"></td> </tr> </table> <p>2. Citations and explanations:</p> <p>Document 1: JP 11-355871 A (Temco Japan Co Ltd), 25 October 1999, full text, Figs. 1-6 Document 2: JP 6-210479 A (Sumitomo Metal Industries Ltd), 02 August 1994, paragraph 0003 Document 3: JP 2003-340370 A (Temco Japan Co Ltd), 02 December 2003, full text, Figs. 1-6</p> <p>Claims 1 and 5 Document 1 describes a bone conduction loudspeaker as well as, in paragraph 0009 of the official gazette, securing the thin portions on either side of a plate yoke by brazing, etc., the rear face of the diaphragm. Accordingly, the inventions of claims 1 and 5 and the invention described in document 1 differ in the fact that the inventions of claims 1 and 5 adopt a securing method of "laser welding" while the invention described in document 1 adopts the securing method of "brazing, etc." Here, paragraph 0003 of the official gazette of document 2 describes that "laser welding is suited for welding thin steel plates as a high-strength weld metal can be achieved with little heat deformation and little segregation." As it is obvious that the diaphragm described in document 1 is a thin steel plate, this examination finds that a person skilled in the art could appropriately adopt commonly known laser welding described in document 1 for this type of securing.</p> <p>Claims 2 and 6 Document 1 describes adopting using screws for attaching the diaphragm and the yoke. Accordingly, the inventions of claims 2 and 6 and the invention described in document 1 differ in that the inventions of claims 2-6 adopt a securing method of "laser welding" while the invention described in document 1 adopts using screws. However, this examination finds that a person skilled in the art could appropriately adopt the laser welding described in document 2 as a securing method suitable for thin steel plates to the securing of the diaphragm and yoke described in document 1.</p> | | | | Novelty (N) | Claims | 1 – 9 | YES NO | Claims | | | | Inventive step (IS) | Claims | 9 | YES NO | Claims | | | | Industrial applicability (IA) | Claims | 1 – 9 | YES NO | Claims | | | |
| Novelty (N) | Claims | 1 – 9 | YES NO | | | | | | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inventive step (IS) | Claims | 9 | YES NO | | | | | | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Industrial applicability (IA) | Claims | 1 – 9 | YES NO | | | | | | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Claims 3, 4, 7, and 8

In contrast to the matter of "both edges of the diaphragm are bent and the bend portions are secured to an outer surface of the diaphragm securing wall of the yoke" in the inventions of claims 3 and 7, the bone conduction loudspeaker described in document 1 differs in that this description is lacking. Document 3 describes providing notches and latching projections which fit into each other for positioning the diaphragm and the yoke. Positioning the a diaphragm and yoke like this is commonly known subject matter, and therefore adopting this method for positioning the diaphragm and yoke described in document 1 is nothing more than matter which a person skilled in the art could appropriately perform. Adopting providing the diaphragm with bent portions which match as a positioning method and securing to the outer surface of a diaphragm securing wall as a securing position is matter which a person skilled in the art could appropriately perform.

Further, adopting laser welding as a securing method limited in the inventions of claims 4 and 8 is nothing more than matter which a person skilled in the art could appropriately perform, as with the inventions of claims 2 and 6.

Claim 9

"Inserting spacers with a thickness equivalent to the gap between the diaphragm and the yoke before securing the bent portions of the diaphragm and removing the spacers after the securing operation" in the context of "bending both edges of the diaphragm and securing the bent portions to an outer surface of the diaphragm securing wall of the yoke" in the invention of claim 9 is neither described in any of the documents cited in the ISR, nor is it obvious to a person skilled in the art.